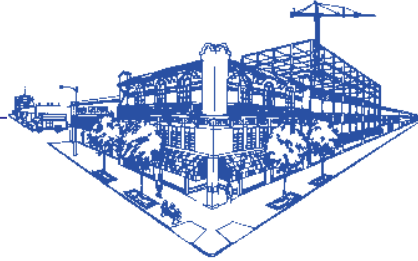


E. D. Hovee & Company, LLC

Economic and Development Services



ECONOMIC & FISCAL BENEFITS MEMORANDUM

To: Peggy Bryan, Executive Director
Skamania County Economic Development Council

From: Eric Hovee & Paul Dennis, AICP

Subject: Economic & Fiscal Effects of the Whistling Ridge Energy Project
to Skamania County

Date: November 1, 2010

Energy developers have identified potential commercial wind power sites in the Columbia River Gorge. Recognizing the potential economic importance of this type of investment, the Skamania County Economic Development Council (SCEDC) retained E.D. Hovee & Company, LLC to evaluate the economic and fiscal impacts of constructing and operating a minimum of 70 megawatt (MW) wind farm comprising the installation of the estimated 50 turbine Whistling Ridge Energy Project – focused on effects most readily attributable to Skamania County.

Specifically, E.D. Hovee & Company was asked to analyze impacts to in two key areas:

- **Economic Impacts.** The wind power generation plant will create jobs and increase spending in the economy during the construction phase and during plant operations.
- **Tax Revenues.** The increase in jobs and local spending will also increase tax revenues for Skamania County, particularly property taxes both short and longer-term.

This report is made based on review of the socioeconomic assessment portion of the Whistling Ridge Energy Project Draft Environmental Impact Statement (DEIS) released in May 2010 together with information regarding current project assumptions and local jurisdiction tax rates.¹ This report also describes other related benefits for Skamania County economic development.

Topics covered by the remainder of this report memorandum are:

Summary Findings & Observations
Economic & Fiscal Impact Methodology
Economic Benefits
Fiscal Effects
Benefits for Skamania County Economic Development

SUMMARY FINDINGS & OBSERVATIONS

Principal findings and observations resulting from this economic and fiscal benefit assessment are summarized as follows:

- A wind farm facility proposed to be built in the Columbia River Gorge with *energy generation capacity* of at least 70 megawatts (MW) or approximately 50 turbines, would represent a total capital investment of approximately \$150.0 million.
- Direct and indirect (including induced) employment created during *construction* of up to one year is estimated at 170 jobs with total payroll of \$21.4 million (and average overall wage of \$125,900). Local procurement generated directly and indirectly during the construction process is estimated at an added \$15.8 million to the Skamania County economy.
- Up to 14 jobs will be directly and indirectly created during *on-going operations* of the wind farm facility with total payroll estimated at \$1.9 million per year (at an average of \$166,700 for facility employees or \$138,200 including employees of other businesses directly and indirectly affected throughout Skamania County). Business revenues generated in Skamania County will be increased by as much as \$17.1 million per year.
- *Fiscal effects* include an estimated \$609,400 in annual property taxes to affected state and local jurisdictions during wind farm operation. In addition, nearly \$46,600 in annual sales tax and \$126,000 in one-time sales tax revenues (during construction) will be generated due to anticipated direct wind energy facility procurement plus direct and indirect worker-related spending in Skamania County.
- Less readily quantifiable but of importance for economic development in Skamania County are added economic development benefits of project location on private taxable lands outside the scenic area, realization of renewable energy objectives of importance nationally as well as locally, and improved opportunity for on-going sustained management of public and private land resources in an economic environment of otherwise diminished local as well as state and federal resources. These objectives are reinforced by positions supportive of wind energy development as adopted by Skamania County and SCEDC.

The remainder of this economic and fiscal benefit report provides a more detailed assessment of each of these topics, in turn.

ECONOMIC & FISCAL IMPACT METHODOLOGY

Representatives from pertinent private industry sources and public agencies (including the Skamania County Economic Development Council) have provided project information that was used to determine the amount of spending and employment for the proposed wind power generation plant. Information is consistent with the March 2009 EFSEC application and May 2010 DEIS for the Whistling Ridge Energy Project and with analysis of other researchers.²

A nationally recognized input-output economic model developed by Minnesota IMPLAN Group has been combined with Skamania County specific data to estimate the economic impacts for both the construction phase and the operations phase of the proposed project. Other general economic data was obtained from Washington State Employment Security. Tax rate information has been obtained from the Washington State Department of Revenue and Skamania County Treasurer's Office.³

Background. The Whistling Ridge wind generation project is proposed as including approximately 50 wind turbines capable of producing at least 70 MW of power. The wind farm will cost an estimated \$150.0 million to construct; with approximately \$13.2 million procured directly from local suppliers. An estimated 143 full and part time workers will be employed directly with the project during construction, earning approximately \$18.0 million in payroll over this time period. Approximately 10% of the construction workers' income is projected to be spent in the local economy for temporary lodging and other living expenses.⁴

Upon completion, the DEIS has estimated that 8-9 full and part-time workers will be needed to directly operate the wind power generation plant over the life of the project, with each worker earning an average of \$166,700 per year. EFSEC and DEIS documentation indicates that an estimated 7 workers would be hired from within the tri-county Gorge area of Skamania, Klickitat and Hood River Counties. Another two employees might be hired from outside the region, but are assumed to eventually relocate to the Gorge in closer proximity to the job site.

Consequently, this analysis utilizes the high end, long-term permanent estimate of 9 full- time employees. While all of the workers are assumed to be employed in conjunction with the Skamania County property, it is not as readily determinable as to what proportion will live in Skamania versus the other two affected Gorge counties, nor where these workers will shop both on and off the job.

For purposes of this analysis, it has been assumed that approximately 60% of worker discretionary income (excluding benefits) will be spent on retail goods and services, with up to 50% of this amount realized as taxable sales in Skamania County.⁵ In addition, as assumed with the DEIS, an anticipated 10% of annual non-wage spending by the wind energy project would result in purchases with taxable revenue benefits to Skamania County. This should be considered as a maximum reasonably attainable level of economic benefit specific to Skamania County.

Economic Impacts. Multiplier estimates are made using the IMPLAN Input-Output economic model that measures inter-industry transactions between all segments of the Skamania County economy. The economic multiplier is defined as the total direct benefit plus the indirect (including induced) benefits *divided by* the direct effect.⁶ For example, a jobs multiplier of 2.0 means that one job could be created indirectly for every new job at the project site.⁷

Fiscal Effects. As part of this analysis of market and non-market effects, major fiscal revenue sources are estimated based on direct impacts only. Those taxes include sales tax, property by type of taxing district, and state B&O tax. Not estimated with this analysis are fiscal effects associated with indirect (or multiplier) activity or development exactions/fees.

What follows is a summary table depicting the quantitative assumptions utilized in this impact evaluation.

Figure 1. Economic & Fiscal Assumptions

Assumption	Value
Capital Investment:	
Construction Value	\$150,000,000
– Procured Locally	\$13,200,000
Assessment Discount Rate	58%
Construction Workers	143
Construction Payroll	\$18,000,000
Local Procurement by Construction Workers (% of Wages)	10%
Output Multiplier*	1.20
Jobs Multiplier*	1.21
Income Multiplier*	1.19
Operations:	
Number of Workers	9
% Local Area Labor (with in-migrants)	100%
Average Compensation (includes benefits)	\$166,700
Taxable Retail Purchases (% of Operations Costs)	10%
Taxable Retail Purchases (% of Wages)	30%
Power Production (Megawatts)	70
Number of Hours in a Year	8,760
% of Time Power is Produced**	30%
Average Power Price per MWh**	\$80.0
Output Multiplier*	1.16
Jobs Multiplier*	1.54
Income Multiplier*	1.29
Fiscal Taxes Rates:*	
State Sales Tax	6.5%
Local Sales Tax	0.5%
Property Tax Levy Rate (per \$1,000 assessed valuation)	\$9.67336

Notes: * Economic multipliers and tax rates are specific to Skamania County.
** These figures are conservative industry assumptions and are not based upon business data or information from the developer.

Sources: Private firms and public agencies including Skamania County and E.D. Hovee & Company, LLC.

ECONOMIC BENEFITS

Economic benefits are categorized into two different phases – construction and ongoing operations. The economic benefits associated with the construction phase are substantial but expected to last over a relatively short time period of up to about 12 months. Economic benefits estimated for the operations phase recur annually, lasting as long as the facility is in operation.

While the economic benefits calculated are intended to constitute only the activity occurring in Skamania County, companies interact with other firms on a regional, national, and/or global level, providing a broader economic benefit that reaches well beyond the jurisdictional boundaries of Skamania County.

Local Economy

According to the Washington State Employment Security Department, Skamania County had experienced economic growth between 2001 and 2007. In 2007, the unemployment rate fell from 11.0% (2001) to 6.5%; the second lowest rate experienced in the last two decades. During this same time period the local labor force expanded by only 5%, while the number of unemployed declined by 39%.

However with the subsequent relatively sudden and prolonged economic recession, Skamania County's economy has been particularly hard hit. County-wide unemployment has more than doubled to a rate averaging more than 12.9% for the first three quarters of 2010. This compares with a statewide rate averaging 9.3% for Washington state over the same period (through September 2010).⁸

Over the 2001-07 time period, employment in Skamania County had increased by 420 jobs (or by 22%). Due to recent economic contraction, Skamania County has lost about 55% of its previous job gains (or a loss of 230 jobs) through 2009.

As of 2009, a typical worker in Skamania County earned \$31,300 per year plus benefits. Highest paying sectors include government at \$41,000 per year (federal workers earn \$52,500 on average), professional and technical services (\$53,200), administrative and waste services (\$45,600), and wholesale trade (\$45,400).

It is within this context of a more pressing need for re-balanced and more vigorous, higher wage job growth for Skamania County that this evaluation of a major wind-generation facility is set.

Construction Phase

As identified in the assumptions section of this report, a minimum 70 MW wind power generation facility would represent an investment value of \$150.0 million. Approximately \$13.2 million could be anticipated to be procured within Skamania County. The local economy will be further benefited through indirect (including induced) effects by another \$2.6 million in added Skamania County business revenues for a total local economic benefit of \$15.8 million during construction.

The wind power generation investment is expected to support an average of 143 full- and part-time jobs during the construction period of up to one year; approximately 330 workers will help construct the project, with peak on-site employment estimated at 265. These jobs are phased in over the entire construction period. Construction jobs will likely be supported by as many as another 27 jobs in the local economy for a total of 170 jobs over the duration of construction.

Based on information provided by pertinent public and private sources, construction workers, on average, are anticipated to earn approximately \$125,900 per worker, generating a total construction payroll of \$18.0 million. This construction payroll is projected to stimulate another approximately \$3.4 million of household income within the Skamania County economy during the construction phase, for a total combined payroll benefit of \$21.4 million.

Construction workers can also be expected to spend about \$1.8 million on taxable retail goods/services plus local lodging. *Note:* the project average wage for construction workers significantly exceeds the countywide average wage of \$31,300 for all jobs in Skamania County (as of 2009).

Figure 2. Economic Benefits Associated with Construction (Cumulative)

Impact Category	Annual Economic Benefits		
	Direct	Indirect	Total
Capital Investment	\$150,000,000	–	–
– Locally Procured	\$13,200,000	\$2,600,000	\$15,800,000
Construction Jobs	143	27	170
Construction Payroll	\$18,000,000	\$3,400,000	\$21,400,000
– Average Wage	\$125,900	\$125,900	\$125,900
Local Procurement by Construction Workers	\$1,800,000	–	–

Note: All estimates subject to change. Indirect includes induced impacts resulting from added worker spending.

Source: Private firms and public agencies, E.D. Hovee & Company, LLC.

Operations Phase

It is assumed that the wind power generation facilities being considered will produce at least 70 megawatts (MW) of power. The project is assumed to sell its power at an average price estimated in the range of \$80 per megawatt hour (MWh), generating an estimated \$14.7 million

of direct annual gross business income.⁹ Another \$2.4 million will be generated at other local businesses in Skamania County for a total Skamania County business income benefit in the range of \$17.1 million.

The project is expected to lead to direct employment of approximately 9 workers during wind farm operations. Another 5 jobs are expected to be supported elsewhere in the local economy for a total direct plus indirect (including induced) jobs impact estimated at 14 over the duration of ongoing facility operations.¹⁰

As noted, average annual wage for on-site workers is \$166,700 (including benefits). Total annual payroll associated directly with the wind energy project is estimated at \$1.5 million. As the wind power plant and its workers purchase local goods and services, another \$435,000 of wage-related income is indirectly supported elsewhere in the local economy. In total, the proposed wind power plant is projected to support up to an estimated \$1.9 million of added household income per year in Skamania County.

Figure 3. Annual Economic Benefits Associated with Operations

Impact Category	Annual Economic Benefits		
	Direct	Indirect	Total
Business Revenues	\$14,716,800	\$2,354,700	\$17,071,500
Number of Jobs	9	5	14
Total Payroll	\$1,500,300	\$435,100	\$1,935,400
– Average Wage	\$166,700	\$87,000	\$138,200
Local Procurement			
– For Facility Purchases	\$230,000	--	--
– By Workers	\$450,090	\$130,530	\$580,620

Note: All estimates are preliminary and subject to change. No estimate is made for potential indirect effects of local facility procurement, due to likely wide variability in level of impact depending on the type(s) of local procurement that occur.

Source: E.D. Hovee & Company, LLC using IMPLAN data.

Local procurement of goods and services subject to sales tax is estimated at \$230,000 per year in direct wind project related purchases and more than \$580,000 annually in purchases directly and indirectly stimulated by worker spending.

FISCAL EFFECTS

If wind power generation facilities developed in Skamania County as proposed, considerable revenues will be generated for local and state government agencies. Primary tax revenues include state business & occupation (B&O) tax together with state and local sales and property taxes.

Construction Phase

Sales tax represents the primary source of non-dedicated revenue attributable to construction projects for state and local jurisdictions in Washington state. However, this revenue is reduced for facilities with types of construction subject to sales tax exemption.

The State of Washington offers a state sales tax exemption on construction of *Energy Generating Facilities* as long as the plant produces at least 200 watts of electricity. This exemption applies to both the state and local portions of sales tax on construction.¹¹

However, affected state and local governments will receive revenues from taxable sales to construction workers during the construction period. As a result, the State of Washington can be expected to receive an estimated \$117,000 in sales tax during the construction period. Local jurisdictions will receive an estimated \$9,000 in one-time sales tax revenue during the construction period.

Operations Phase

During plant operations, both sales tax and operating revenues will be realized by state and local jurisdictions. Combined revenue potential is estimated at approximately \$656,000 per year. Approximately \$46,600 annually (or 7%) of the combined total is attributable to sales tax revenues from direct plant procurement plus the direct and indirect (including induced) effects of worker purchases.

The preponderance of long-term tax benefits (93%) is attributable to property taxes. Operations of the wind power generation plant will provide up to an estimated \$609,400 in annual property taxes from the combined \$150.0 million capital investment less discount rate of 58%.¹²

This estimate assumes that all of the wind power generation plant assets are wholly owned by an entity that services as an independent power producer (IPP), selling power on the open market, with primary fiscal benefits accruing to directly affected local jurisdictions in Skamania County.¹³

Figure 4. Fiscal Benefits of the Proposed Wind Power Generation Plant

Type of Tax	Direct Benefit	
	Construction	Operations
Sales Tax:		
Washington State	\$117,000	\$43,260
Local Area	\$9,000	\$3,330
Total Sales Tax	\$126,000	\$46,590
Property Tax:		
Washington State		\$137,000
Local Jurisdictions		\$472,420
Total Property Tax		\$609,420
Total Tax Revenue:	\$126,000	\$656,010

Notes: * All estimates are in 2010 dollars and subject to change. Fiscal effects are based on current tax rates.

** Local jurisdiction revenues would be divided between Skamania County, schools, fire and other potentially pertinent taxing jurisdictions but with no specific allocations presented at this time.

Source: E.D. Hovee & Company, LLC.

For most taxing jurisdictions, the revenue potential represents a *net add* to property taxes already being received from other sources. In cases as with voted levies and bonds (as with school districts), the property taxes generated by the wind facility will represent partial replacement of property taxes already paid by existing ratepayers rather than net added revenues. This has the effect of reducing the tax rate for existing taxpayers and providing added bonding capacity that could be used to pay for other capital facility needs as identified in the future.

BENEFITS FOR SKAMANIA COUNTY ECONOMIC DEVELOPMENT

This report concludes by briefly describing other less readily quantifiable benefits of the Whistling Ridge Energy Project for Skamania County economic development and diversification. Of particular importance is the consistency of this proposed project with adopted policies and economic development priorities of Skamania County and the Skamania County Economic Development Council (SCEDC) -- as the Washington state designated Associate Development Organization (ADO) for Skamania County:

- The Skamania County Board of Commissioners is on record by resolution as endorsing the creation of a Columbia Gorge-Bi-State Renewable Energy Zone in recognition of the region's "world class renewable energy assets" and the importance of bringing economic vitality and energy self-sufficiency for continued management of a changing natural-resource based economy in Skamania County.
- SCEDC has identified pursuing renewable energy including wind power potential of the Whistling Ridge project as one of six priority economic development goals for 2010. Project advantages are noted as including location outside the Scenic Area boundary and generation of tax base and jobs for Skamania County. By letter to EFSEC Council Members dated June 16, 2010, the SCEDC Board of Directors expressed its full support for the Whistling Ridge Wind Energy Project.

In its analysis of the project, SCEDC has also noted the unique challenges that face a county in which less than 3% of the county's land area (of 1.07 million acres) is directly available for residential, business and commercial development – including land that is already developed. Less than 4% of Skamania County's land area – including the site of the proposed wind energy project – is private forest commercial resource land. The remaining 93% of Skamania County's land base is situated within the Gifford Pinchot National Forest (approximately 80%), Columbia River Gorge National Scenic Area (8%), or state forest land (6%).

Since creation of the National Scenic Area in 1986, more than 20,000 acres of private land have been purchased by the federal government and removed from the private tax rolls. This places increasing burden on the less than 7% share of the county that is privately owned and outside the Scenic Area for local tax base – covering both land directly available for development and private commercial forest land that could also serve as a wind energy resource yielding added tax base potential.

In summary, this assessment provides estimates of quantifiable potential job, payroll, spending and tax base benefits available with construction and operation of the proposed Whistling Ridge Energy Project. Less readily quantifiable but of importance for economic development in Skamania County are added benefits of project location on private taxable lands outside the National Scenic Area, realization of renewable energy objectives of importance nationally as well as locally, and improved opportunity for on-going sustained management of public and

private land resources in an economic environment of otherwise diminished local as well as state and federal resources.

END NOTES

- ¹ The March 10, 2009 EFSEC Application and subsequent DEIS of May 2010 evaluate economic impacts for a three-county Gorge region consisting of Skamania, Klickitat and Hood River Counties. This evaluation is focused on the portion of impacts most readily attributable to Skamania County.
- ² Background information useful for this analysis has included a similar report on *Economic Impacts of the Kittitas Valley Wind Project*, prepared by ECONorthwest as a report to the Economic Development Group of Kittitas County, updated as of August 11, 2006. Another reference is the Renewable Northwest Project, www.rnp.org.
- ³ Information for this report is from sources generally deemed to be reliable. However, E. D. Hovee & Company, LLC does not guarantee the accuracy of information obtained from third party sources. Data is subject to change without notice. The findings and conclusions contained in this report are those of the authors and should not be construed as the opinion of any other party prior to their express approval, whether in whole or part.
- ⁴ The proportion of construction work secured by local contractors is variable, depending on factors such as local procurement initiatives and labor union agreements. This is a conservative estimate compared to other facilities.
- ⁵ This 60% figure is somewhat more conservative the DEIS estimate that 70% total direct, indirect and induced incomes represents disposable income. The DEIS estimates 70% is spent in Washington-side counties; this analysis assumes 50% accrues as taxable benefit to Skamania County.
- ⁶ For purposes of this analysis, indirect benefits are defined to include induced impacts resulting from worker expenditures within the local economy of Skamania County.
- ⁷ The economic impact results discussed in this report rely on IMPLAN model data for Skamania County from 2007. The results reported have been adjusted for inflation to reflect 2010 dollars.
- ⁸ Unemployment data from the State of Washington Employment Security Department, not seasonally adjusted.
- ⁹ Estimates of direct and indirect gross business revenue are based on a relatively conservative wholesale cost of power assumed to be in the range of \$80 per megawatt hour (MWh), based on projected normalized lifecycle costs (in 2006 \$) for established Washington/Oregon wind sites at \$78 per MWh in 2008, increasing to as much as \$102 by 2012, dropping somewhat thereafter reflecting a capital cost allowance for transmission reinforcement for projects entering service in 2012 and later (down to about \$86 by 2015). Information is based on email correspondence from Jeff King, Northwest Power and Conservation Council, June 5, 2008. If long-term average pricing proves to average above \$80 per MWh overall figure assumed, gross business benefits can be expected to be correspondingly higher but with little impact anticipated for project-specific job generation.
- ¹⁰ The estimate of 14 direct and indirect jobs is above the 11-12 jobs identified by the DEIS because the DEIS also references two non-local workers that are anticipated to eventually relocate to the Gorge region after start-up of operations. Compared to other counties in the State of Washington, economic multipliers in Skamania County (affecting indirect employment and incomes) are relatively low due to the small population base of the county and substantial sales leakage with many purchases (from direct spending) occurring outside Skamania County.
- ¹¹ Tax information is based on telephone contact with Beth Mills, Washington Department of Revenue, June 2008.
- ¹² This discount rate is based on the assumption that any of the property used to generate electricity is exempt from I-747 and classified as new construction. If the project spans several counties or is owned by a public utility, it is centrally assessed by the State of Washington Department of Revenue based on income flows. From consultation with the assessor's office in Klickitat County, state assessments can be as much as 15% less than county assessments. A 50% reduction in the capital costs appears appropriate and is close to the figure that DOR has used to discount a centrally assessed project. The combined effect of these changes amounts to an approximately 58% discount from project capital costs. Information for this assessment and project sizing is based on email correspondence from Peggy Bryan to Eric Hovee, March 10, 2009.

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- ¹³ If the project were developed and/or owned by a utility operating within a multi-county or multi-state region, the value could be spread across the utility's operating system, leaving less value for local property tax distribution.